

REMARKS

Claims 1, 2, 4-6 and 10-19 are pending in the present application.

Claims 4-6, 18 and 19 are allowed.

Reconsideration on the merits is respectfully requested.

The application is believed to be in condition for allowance for the reasons set forth herein. Notice thereof is respectfully requested.

Claim Rejections - 35 USC § 102

Claims 1, 2 and 10-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Asano et al. (US 6,511,736).

The Office has argued that Asano discloses an ink jet recording medium comprising a substrate, an undercoat layer on the substrate, a multi-layered ink fixing layer on the undercoat layer wherein the multi-layered ink fixing layer comprises an outermost ink fixing layer and one or more intermediate ink fixing layer. The Office further argues that since the undercoat layer is capable of fixing ink it is equivalent to the claimed receiving layer. The outermost ink fixing layer is

argued to comprise cationic compound such as polymerization product of dimethyldiallylammonium chloride. The undercoat layer is further argued to comprise a pigment such as silica and a binder such as polyvinylalcohol wherein the undercoat layer may optionally contain the cationic compound. The undercoat layer is argued to comprise a polymer resin containing repeating units derived from vinyl acetate monomer or vinyl propionate.

The basis of this rejection has been argued previously wherein applicant pointed out that at col.8, lines 9-15, Asano et al. specifically excludes the combination of colloidal silica and a polymer resin in the undercoat layer as two separate compounds, but presents a choice between the pigment, the polymer resin or a complex of pigment with polymer:

"To enhance the gloss of the ink jet recording material, a colloidal silica, **or** a polymer resin prepared by polymerizing at least one monomer having at least ethylenically unsaturated bond, **or** a complex of colloidal silica with a polymer resin produced by polymerizing at least one monomer having at least one ethylenically unsaturated bond, may be contained in the undercoat layer.
" (Emphasis added)

This specifies that in order for colloidal silica and a polymer resin as disclosed at col.8, lines 9-44, to be present, they must be present as a complex. In support of this, col.8, line 52, to col. 9, line 6, discloses that:

"The complex of the colloidal silica with the polymer can be produced by polymerizing the ethylenically unsaturated monomer or monomers in the presence of a silane coupling agent and a colloidal silica to form a Si--O--R bond (R represents the polymer component) through which the **polymer molecules are bonded with the colloidal silica particles.**

Alternatively, the polymer/silica complex is produced by reacting a polymer modified with a silanol group with the colloidal silica to form a Si-O-R bond (R is as defined above) through which the polymer molecules are bonded with the colloidal silica particles.

In the polymer/silica complex, the polymer component preferably has a glass transition temperature (Tg) of 40°C or more, more preferably 50 to 100°C. When the Tg is too low, the resultant undercoat layer may exhibit a reduced ink-absorbing rate and the ink received in the ink fixing layer may be blotted, probably due to the phenomenon that the resultant polymer/silica complex causes the dried undercoat layer to have too dense a film structure. When the Tg of the polymer/silica complex is more than 40°C, the outermost ink fixing layer formed by the cast-coating procedure may exhibit an enhanced release property from the casting drum."

(emphasis added)

which clearly indicates that a covalent bond is formed between the polymer resin and the colloidal silica. We contend that no such covalent bond exists between the pigment and the film-forming polymer latex for the invention described in claim 1 and therefore Asano et al. does not anticipate claim 1.

The Office was not persuaded by this argument, arguing instead that:

"the prior art to be not limited to a complex of colloidal silica with a polymer resin prepared by polymerizing at least one monomer having at least ethylenically unsaturated

bond to enhance the gloss of the recording material, the use of colloidal silica or polymer resin prepared by polymerizing at least one monomer having at least ethylenically unsaturated bond in place of the complex is also taught in col. 8, lines 9-12:

"To enhance the gloss of the ink jet recording material, a colloidal silica, **or** a polymer resin prepared by polymerizing at least one monomer having at least ethylenically unsaturated bond, **or** a complex of colloidal silica with a polymer resin produced by polymerizing at least one monomer having at least one ethylenically unsaturated bond, may be contained in the undercoat layer."

When the prior art uses polymer resin prepared by polymerizing at least one monomer having at least ethylenically unsaturated bond, the claimed invention reads on the prior art." (emphasis added)

The Office further states that: "the use of colloidal silica **or** polymer resin prepared by polymerizing at least one monomer having at least ethylenically unsaturated bond in place of the complex is also taught in col. 8, lines 9-12" (emphasis added). We agree with this position and suggest that this is contrary to the reasoning for the anticipation rejection. The emphasis on the use of the word "or", by the reference and the Office, confirms the position of the Applicant that either colloidal silica or polymer resin prepared by polymerizing at least one monomer having at least ethylenically unsaturated bond is used in place of the complex, **but not both** other than as a complex.

Furthermore, the only reference to the use of a "polymer resin prepared by polymerizing at least one monomer having at least ethylenically unsaturated bond", such as vinyl acetate or vinyl propionate, is made in the passage at col. 8, lines 9-15, and the passage at col. 8, line 15, to col. 9, line 6, reading on this passage. Moreover, there are no allusions to other binders or polymers prepared by polymerizing at least one monomer having at least ethylenically unsaturated bond.

In addition, it is clear from col. 8, line 52, to col. 9, line 6 (see above) that the complex of colloidal silica with this polymer resin has specific complex-related properties and does not occur spontaneously upon mixing colloidal silica with a polymer resin prepared by polymerizing at least one monomer having at least one ethylenically unsaturated bond.

Therefore, in the absence of complex formation as in the present case, the passage at col. 8, lines 9-15 clearly teaches away from the use of a colloidal silica and a polymer resin prepared by polymerizing at least one monomer having at least ethylenically unsaturated bond as in the present invention.

Applicants contend that the passage at col. 8, lines 9-12, can not properly be interpreted in a way that would suggest the

the claimed invention reads on the reference. The composition set forth in claim 1 can not be considered to be anticipated by a reference which fails to recite each element of the claim. Asano fails to recite a pigment and the recited polymer in the same layer and, in fact, teaches against such a combination. Therefore the rejection under 35 U.S.C. 102(e) is improper and withdrawal is solicited.

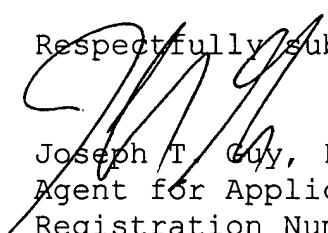
Claims 2 and 10-17 ultimately depend from claim 1 and are patentable for, at least, the same reasons as claim 1.

Applicants respectfully submit that the rejection of claims 1, 2 and 10-17 under 35 U.S.C. §102(e) as being anticipated by Asano is improper. Withdrawal is solicited.

CONCLUSIONS

Claims 1, 2, 4-6 and 10-19 are pending in the present application. All claims are believed to be in condition for allowance. Notice thereof is respectfully requested.

Respectfully submitted,


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